

## ABSTRACT OF THE DISCLOSURE

A method for noninvasive on-line secondary path modeling for the  
5 filtered-X LMS algorithm actively controls periodic noise. The method, based in  
the frequency domain, uses the concept of linear independence of two  
equations/two unknowns to arrive at the secondary path estimate. Linear  
independence of the two equations is achieved by adjusting the control filter  
output via the filter coefficients prior to the acquisition of the second set of data  
10 corresponding to the second equation.